

Listing of Claims:

1. (Previously Presented) A catalytic selective oxidation reactor, comprising a reactor vessel with counter current cooling means and at least one stage, each stage being provided with an inlet for a first feedstock, and an inlet for a second feedstock, gas mixing means, and a catalytic reaction zone, wherein the reaction zone comprises a selective oxidation catalyst coated on a metal support, wherein the selective oxidation catalyst comprises a platinum group metal carried on a high surface area metal oxide support, wherein the reaction zone is generally annular in shape, and wherein the counter current cooling means comprises at least one of an internal liquid cooling and an external liquid cooling.
2. (Previously Presented) A reactor according to claim 1, wherein the metal support mounted in good heat exchange contact with the cooling means.
3. (Previously Presented) A reactor according to claim 1, wherein the metal is a metal monolith.
4. (Previously Presented) A reactor according to claim 1, wherein the internal cooling means comprises a central jacket mounted within the reactor.
5. (Original) A reactor according to claim 4, wherein the central jacket is connected via a coolant circuit to an external heat exchanger.
6. (Previously Presented) A reactor according to claim 4, wherein the central jacket is connected via a coolant circuit to a circulating pump.
7. (Previously Presented) A reactor according to claim 1, wherein the internal liquid cooling means is centrally located within the reaction vessel and surrounded by the annular reaction zone(s).
8. (Previously Presented) A reactor according to claim 1, having from 2 to 10 stages.

9. (Original) A reactor according to claim 8, having four stages.
10. (Previously Presented) A reactor according to claim 1, wherein the gas mixing means comprise annular mixing vanes or discs.
11. (Previously Presented) A reactor according to claim 1, connected to a reformer having an output gas, wherein the reactor is adapted to remove CO from the output gas to a level sufficient to fuel a fuel cell.
- 12.-14. (Canceled)